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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/673,853	09/29/2003	Marik Marshak	EMS-06301	3713
7590	10/18/2006			
Patent Group Choate, Hall & Stewart Exchange Place 53 State Street Boston, MA 02109-2804			EXAMINER PARK, ILWOO	
			ART UNIT	PAPER NUMBER
			2182	
DATE MAILED: 10/18/2006				

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/673,853	Applicant(s) MARSHAK ET AL.	
	Examiner Ilwoo Park	Art Unit 2182	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 September 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3-7,9-20 is/are rejected.
- 7) ☒ Claim(s) 2 and 8 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>3/4/04</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Claims 1-20 are presented for examination.

Claim Rejections - 35 USC § 101

2. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 11-18 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. The claimed computer software is not being tangibly embodied in a manner so as to be executable.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1, 3-7, 9-11, 13-16, and 18-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yanai et al. [US 5,742,792] in view of Beardsley et al. [US 7,111,004 B2].

As for claims 1 and 7, Yanai et al teach a method for transferring data from a local storage device [primary in fig. 1] to a plurality of remote storage devices [secondary in fig. 1], comprising:

providing, to a portion of the local storage device, data to be transferred from the local storage device to the remote storage device using a first mode [e.g., asynchronous mode in col. 10, lines 42-57] that accesses an indicator [fig. 2] of data being transferred;

selecting [col. 22, lines 23-34] a second mode [e. g., synchronous mode in col. 10, lines 14-27] for transferring data different from the first mode, wherein the second mode does not require the indicator.

However, Yanai et al do not disclose *subdividing* the portion of the local storage device into chunks; for each of the chunks, transferring data; and after all of the data from the chunks has been transferred, using the second mode for transferring data that is provided to the local storage device after selecting the second mode. Beardsley et al teach a method for transferring data from a local storage device [primary storage 8a in fig. 1] to a remote storage device [secondary storage 8b in fig. 1], comprising subdividing [col. 2, lines 1-7] a portion of the local storage device into chunks; for each of the chunks, transferring [col. 1, lines 49-53] data; and after [col. 2, lines 9-12] all of the data from the chunks has been transferred, using a second mode [synchronous copy in col. 2, lines 9-12] for transferring data that is provided to the local storage device after selecting the second mode. Therefore, at the time the invention was made, one of ordinary skill in the art would have been motivated to combine the teachings because they both teach transferring data during initial copy operation between a local storage device and a remote storage device using an asynchronous mode and switching to a synchronous mode and the teaching of Beardsley et al would increase optimization [col. 2, lines 1-4 of Beardsley et al] of bandwidth usage during the initial copy operation.

Art Unit: 2182

5. As for claims 3 and 9, Yanai et al teach the indicator indicates a subsection of the local storage device is being transferred [col. 11, lines 21-30].
6. As for claim 4, Yanai et al and Beardsley et al teach the local storage device is subdivided into cylinders [Yanai et al: col. 50, line 44] and the cylinders are subdivided into tracks and wherein the indicator includes a first data element indicating which cylinders contain data to be transferred and a second data element indicating which tracks contain data to be transferred [Beardsley et al: fig. 2].
7. As for claim 5, Beardsley et al teach providing at least one counter that keeps track of data within the chunks that have been examined for possible transferring to the remote storage device [col. 5, lines 28-34].
8. As for claims 6 and 10, Beardsley et al teach determining that all of the chunks have been transferred when the at least one counter indicates that all of the data has been examined [e.g., col. 23, lines 9-13].
9. As for claims 11, 13-15, 17, and 18, Yanai et al and Beardsley et al also teach computer software to perform a method discussed above.
10. As for claims 19 and 20, Yanai et al and Beardsley et al also teach a system to perform a method discussed above and further teach a plurality of host adaptors that receive and send commands and data; at least one memory coupled to the plurality of host adaptors; a plurality of disk adaptors coupled to the plurality of host adaptors; a plurality of disk drive units coupled to the plurality of disk adaptors; and a plurality of data transmission adaptors coupled to the plurality of host adaptors, the at least one memory, the plurality of disk adaptors, and the plurality of disk drive units, wherein the

Art Unit: 2182

data transmission adaptors send data to the at least one remote storage device [Yanai et al: fig. 1].

Allowable Subject Matter

11. Claims 2 and 8 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ilwoo Park whose telephone number is (571) 272-4155. The examiner can normally be reached on Monday through Friday from 9:00 AM to 5:30 PM. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kim Huynh can be reached on (571) 272-4147. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

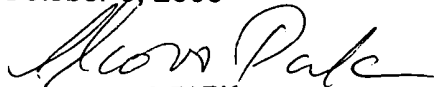
Application/Control Number: 10/673,853

Page 6

Art Unit: 2182

Ilwoo Park

October 6, 2006


ILWOO PARK
PRIMARY EXAMINER